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A Tree Survey and Tree Protection Plan

St Joseph's Boys' National School Clondalkin

Prepared for: Louis Burke Architects

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1.0 Instructions

1.1 I have been instructed by Louis Burke Architects of The Studio 33A Wasdale Park Terenure Dublin 6 to provide a tree survey and tree protection plan as requested for planning permission at St. Joseph's Boys' National School Clondalkin.

2.0 Report Limitations

2.1 The assessment of the trees are limited to what information could be gathered from a visual inspection and does not include climbing inspections, internal investigations of the timber or below ground investigations. The assessment is based on what was visible at the time of the inspection and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.

2.2 This report only relates to factors apparent at the time of the inspection; as a result, further monitoring is imperative if potential problems/hazards are to be avoided. The recommendations within this report are valid for a 12-month period only, unless otherwise stated within the recommendations of the attached report.

2.3 Before undertaking any work to these trees, it would be advisable to check whether any planning or tree preservation controls are in operation, if they are it will be necessary to obtain consent before undertaking any works (pruning or felling).

3.0 Survey Data Collection and Methodology

3.1 The Arboricultural data has been recorded in line with BS 5837:2012. The tree surveyed was conducted by collecting and assessing the following information:

Tree number (Metal tags 428 – 457 inclusive were attached to the trees)
Tree species both common and botanical
Dimensions (Height, trunk diameter, crown spread)
Physiological Condition
Structural Condition
Age
Estimated remaining contribution within their present environment (ERC)
Remarks and Preliminary Recommendations
Retention category

3.2 Each tree included within this assessment has been numbered and most of them have been plotted on the map (Map 1) to assist in their relocation.

3.3 On the accompanying drawing (Map 1), I have shown where the tree protection fence (hatched yellow line) is to be erected, this is to safe guard from machine damage of the retained trees.

3.4 The inspection of the trees involves a visual assessment from ground level only and does not include any invasive means of assessing the trees internally, their below ground parts or the aerial parts that are not visible from the ground. Good, moderate, poor and bad is being used to summarize the physiological and structural condition of the trees with the comments giving more detail.

3.5 The retention category has been assessed and categorized according to their quality and value within the existing context (BS-4.5), and not in conjunction with any proposed development plans. In making this assessment, particular consideration was given to;

Arboricultural value – An assessment of the tree health, structural form, life expectancy, species and its physical contribution to or affects on other features located on site.

Landscape value – An assessment of the tree locality including its contributions to other features as well as to the site as a whole.

Cultural value – additional contributions made such as conservation, historical or commemorative value.

3.6 The trees will fall into one of the following categories, in accordance with the cascade chart illustrated in table 1 of BS 5837:2012. The classification process begins by determining whether the tree falls within the (U) category, if not then the process will continue by assuming that all trees are considered according to the criteria for inclusion in the high category (A). Trees that do not meet these strict criteria will then be considered in light of the criteria for inclusion in the moderate category (B) and failing this, they will be allocated a low category (C).

The following summarizes each of the categories:

Category U –	Those trees in such a condition that any existing value would be lost within 10 years. Most of these will be recommended for removal for reasons of sound Arboricultural practice/ management.
Category A -	Trees of high quality/value with a minimum of 40 years life expectancy.
Category B –	Trees of moderate quality/value with a minimum of 20 year life expectancy.
Category C -	Trees of low quality/value with a minimum of 10 years life expectancy

NP - Newly Planted	Within 3 years of establishment
EM - Early Mature	In first 1/3 of life expectancy
MA - Middle Aged	In second 1/3 of life expectancy
M - Mature	In final 1/3 of life expectancy
OM - Over Mature	Reached full maturity, now declining through natural causes
Vet - Veteran	Notable on account of large size, old age, ecological importance

Tree Physiological and Structural condition

Good: No obvious defects visible, vigor and form of tree good.

Moderate: Tree in average condition for its age and the environment.

Poor: Tree shows signs of ill health/structural defect

Bad: Tree in seriously bad health/major structural problem

ERC:

Estimated remaining contribution in years, expressed as less than 10, 10+, 20+ or more than 40

Remarks:

Descriptive comments about the health (physiological) or form (structural) of the tree, its environment or external influences and may include preliminary management recommendations

Category grade:

- **A:** Those trees of a high quality and value in such a condition as to be able to make a substantial contribution.
- **B:** Those trees of a moderate quality and value in such a condition as to be able to make a significant contribution.
- **C:** Those trees of a low quality and value currently inadequate condition to remain until new planting could be established.
- **U:** Those trees in such a condition that any existing value would be lost within 10 years and which should be in the correct context, removed for reasons of sound arboricultural management.

4.0 Findings

4.1 The trees surveyed are situated on the school ground and are in proximity of the proposed work area. Some of the trees are in a green space and the others are running in between the inside of the property boundary and a road.

4.2 The conditions of the trees range from good to poor. Most of the trees that border the property are conifers and are in a good to moderate condition. Some of these trees are in close proximity to the hard ground and the roots can be seen breaking up the tarmacadam. These trees are also providing a good screen. The rest of the trees in the green space offer a range of broadleaf species and are in a good to poor condition.

4.3 Please refer to a separate document (Data Sheet St Joseph's Boys' National School Clondalkin) to see the information about each tree.

4.4 Four trees have been identified in the data sheet for removal (446, 451, 452, 453), however these trees are not dead, dying or diseased and are not in the area that will be impacted by construction. This is general advice for the school management.

5.0 Arboricultural Implication Study

5.1 Introduction

5.1.1 It is being proposed that construction work will be carried out within close proximity of the retained trees.

5.1.2 This section of this document is designed to assess the impact of the proposed construction work on the trees within this site area and to look at the necessary measures that will need to be undertaken to help retain the trees shown for retention free from adverse impacts for the duration of the construction period.

5.2 Impact Assessment

5.2.1 All of the root zones that would fall under the RPA (Root Protection Area) near the work zone is being protected by a tarmacadam road.

It is my understanding that tarmacadam road will not be disturbed during the construction and thus the root will remain protected from damage. However, if the tarmacadam does need to be removed, it should be done carefully so minimal damage is caused to the roots. Then ground matts must be put down to minimise their damage. **(See Appendix 1. Figure 1)** and the protective fence line will need to be redrawn.

5.2.2 A protective fence should be put in place to minimise damage to the retained trees. **Appendix 1. figure 2** gives an example of the protective fencing that needs to be erected at the very start of the works and be maintained in place throughout the construction works period around the trees to be retained. Arborist Associates Ltd. Arboricultural Implication Study- 2014.

5.3 Monitoring

5.3.1 Any construction works within close proximity to retained trees are advised to be undertaken in accordance with approved method statements prepared by the construction contractor under the direct supervision of a qualified consultant Arboriculturist. Therefore, during the construction works, a professionally qualified Arboriculturist is recommended to be retained by the principal contractor or site manager to monitor and advice on any works within the RPA of retained trees to ensure successful tree retention and planning compliance.

5.3.2 It is advised that tree protection fencing, any required special engineering and supervision works must be included in the main tender documents, including responsibility for the installation, cost and maintenance of tree protection measures throughout all construction phases.

5.3.3 Copies of the tree retention and protection plan, a copy of BS 5837(2012) and NJUG 4 (2007) should all be kept available on-site during development. All works are to be in accordance with these documents. Arborist Associates Ltd. Arboricultural Implication Study- 2014

5.3.4 On the completion of the construction works, all trees retained are to be reviewed by the project Arboriculturist and any necessary remedial tree surgery works required to promote the health of the trees and safety are to be implemented. Arborist Associates Ltd. Arboricultural Implication Study- 2014

6.0 Arboricultural Method Statement/Tree Protection Strategy

6.1 The objective of this arboricultural method statement/tree protection strategy is to provide information for the main building contractor/site manager on how trees need to be protected during a construction project and so that they can prepare their own site-specific detailed method statement for their works.

6.2 It is necessary for tree protective fencing to be erected and all other mitigation measures required to be put in place prior to the development works commencing on site and these are to enclose and protect the root zone of the tree vegetation proposed for retention. See relevant drawing for the position of the protective fencing and other mitigation measures.

6.3 The protection of the tree vegetation shown for retention within this proposed development is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of the retained trees. Arborist Associates Ltd. Arboricultural Implication Study- 2014 Stage 1.

6.4 Pre-Construction Works

6.4.1 Prior to the main construction works commencing on site the following needs to be planned:

1. The developer or main contractor needs to appoint an Arboriculturist for the duration of the project. The Arboriculturist is to make regular site visits to ensure that the tree protection measures are in place and adhered to.

2. The main contractors and all sub-contractors work force are to be briefed on the tree protection and ensure that these measures are to be kept in place throughout the construction period.

3. All personnel are to adhere to the recommendations of the appointed Arboriculturist.

4. Any issues in relation to the trees shown for retention must be discussed with the appointed project Arboriculturist and the necessary mitigation measures put in place without delay and prior to the works being carried out.

6.5 Site Meeting

6.5.1 Prior to any works commencing on site, it is necessary that a meeting be arranged between the project manager, site foremen, the project Arboriculturist to identify and finalise the trees for removal and the line of the protective fencing.

6.6 Tree Works

6.6.1 The developer or the main contractor is to appoint a reputable tree surgery company competent of carrying out the remedial tree surgery works and tree felling that are required on this site. The tree surgery contractor is to produce a method statement detailing how he plans to undertake the works and informing the site foreman of the process so the necessary steps can be taken to ensure the works are carried out safely and efficiently. The works are to be carried out by appropriately trained personnel taking account of the recommendations of BS3998 2010.

6.6.2 Tree Removal

Trees for removal are to be identified by the project Arboriculturist and the method of removing the stumps is to be carried out to the recommendations of the project Arboriculturist. The trees in the way of the development layout are to be removed in such a manner not to cause damage to those being retained. Where necessary to avoid damage to the trees to be retained, these are to be removed in sections by a tree surgeon (Arborist). The stumps are to be ground out with a mechanical stump grinder taking care not to cause damage to the roots of trees being retained. Arborist Associates Ltd. Arboricultural Implication Study- 2014

6.6.3 Remedial Tree Surgery Works

The necessary remedial tree surgery works required to promote health and safety of the trees to be retained is to be carried out. A schedule of these works is to be produced by the project Arboriculturist taking into consideration the trees within their new built environment and prior to these works being carried out; they are to be agreed with the local authority.

6.7.0 Erection of the Protective Fencing (See Appendix 1 Figure 2)

6.7.1 The fencing needs to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail on appendix 1) using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres. Onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.

6.7.2 Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing & appendix 1.

6.7.3 Once the protective fence line is erected, then the main construction works can commence on site.

6.7.4 Storage of Material and Work Yard - These areas must be identified on the work drawings prior to the construction works starting. These must be positioned outside the root protection areas around the trees being retained. Arborist Associates Ltd. Arboricultural Implication Study- 2014 Stage 2

6.8 Root Protection Area (RPA)

6.8.1 For single stem trees, the RPA should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter. The calculated RPA for each tree should be capped to 707 m2.

6.8.2 The RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution.

6.8.3 Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:

a) the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
b) topography and drainage;
c) the soil type and structure;
d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

6.9 The Construction Works Stage

6.9.1 Protective Fencing - During the course of the works, special attention must be paid to ensure that these fences remain upright, rigid and complete at all times. They must be checked daily by the main contractor/foreman and any damage noted must be fixed immediately. If works need to take place inside the protective fence lines, then the project Arboriculturist must be informed in advance of the works taking place and the mitigation measures required to reduce impact on the trees and hedges agreed. These mitigation measures will include the supervisions of these works by the project Arboriculturist. The protective fencing is to remain in place throughout the construction works phase and must only removed when all the works are complete and at this stage incorporated into the finished landscape.

6.9.2 Excavations - The excavation works are only to commence once the protective fence line is in place. The excavations need to be viewed on site once marked out with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the work space required to allow for the construction works to proceed and to assess what additional mitigation measures will be required to protect those trees to be retained. In certain areas, it may be necessary to use an alternative method of excavating to prevent encroachment into the RPA of the trees to be retained and this may include such methods as retaining walls or similar. Where roots of trees to be retained are exposed during the excavation works, these are to be assessed by the project Arborist and pruned back beyond damaged material. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and death of root material. Where the Hessian sacking is used, it will be necessary to keep this moist especially during dry periods.

6.9.3 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

6.9.3.1 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.9.3.2 New temporary ground protection should be capable of supporting anybody entering or using the site without being distorted or causing compaction of underlying soil.

NOTE The ground protection might comprise of the following:

- *For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*

6.9.3 Working within the RPA (Root Protection Area) – If it becomes necessary to carry out works within the RPA of tree/trees, these must be discussed and agreed with the project Arboriculturist. All works must be carried out manually. Root pruning is to be undertaken by an Arborist or skilled landscaper using appropriate cutting tools such as a secateurs or hand pruning saw. The ground within the RPA of the trees must be protected from damage as per the recommendations of 6.2.3 of BS5837 2012. See also appendix 1 Figure 3

6.9.4. Finished ground levels/Landscaping - The existing ground levels within the RPA of trees must be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels. All soft and hard landscaping within the RPA of the trees to be retained must be carried out manually and the soil levels must not be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 must be adhered to during the landscaping within the RPA of the trees being retained.

6.10 Other Items

6.10.1 The following is a list of additional activities that are not allowed within the RPA or within the vicinity of the trees being retained.

1 - Storage of equipment, fuel, construction material, or the stockpiling of soil or rubble.

2 - Burning rubbish

3 -The washing of machinery

4 - Attaching notice boards, cables or other services to any part of the tree.

5 - Using neighbouring trees as anchor points.

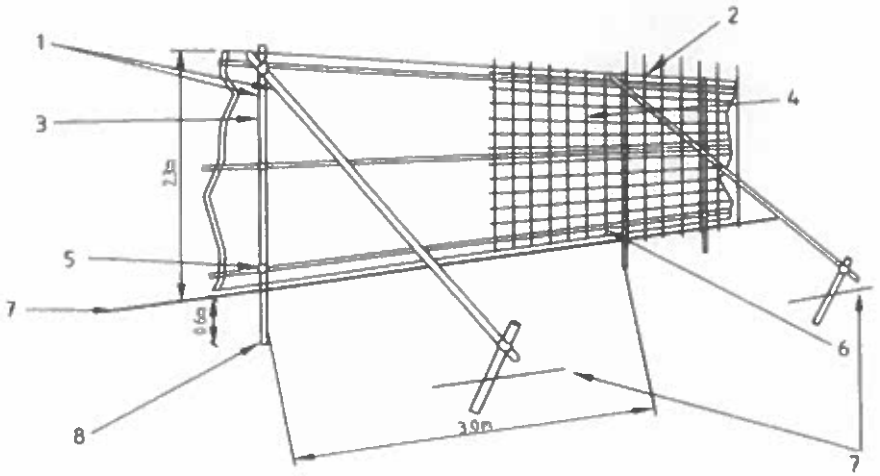
6.11 Post Construction Works

6.11.1 This project is not to be considered complete until all retained trees have been re-examined by the project Arboriculturist and the remedial works necessary to ensure the health of the trees and the immediate safety of the end user of this development are implemented. This report has been produced as part of a planning application for these lands and is for the sole use of the above named client and refers to only those trees identified within. Its use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

Appendix 1

Figure 1: Examples of protective mats

Fencing for RPA



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx 0.6m driven into the ground

Figure 2. – Protective fencing for RPA

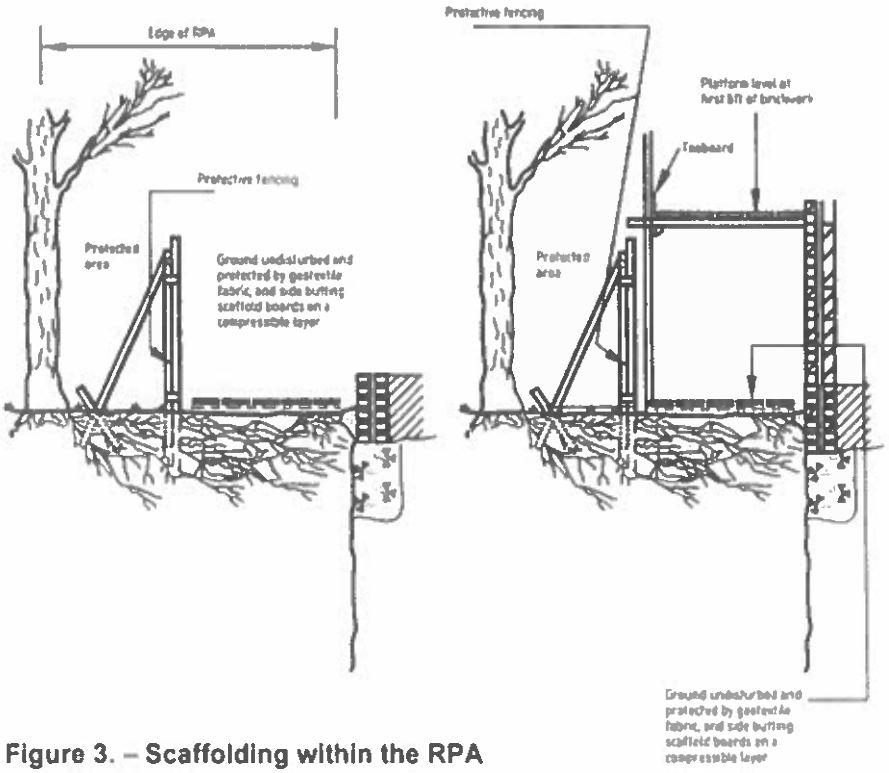
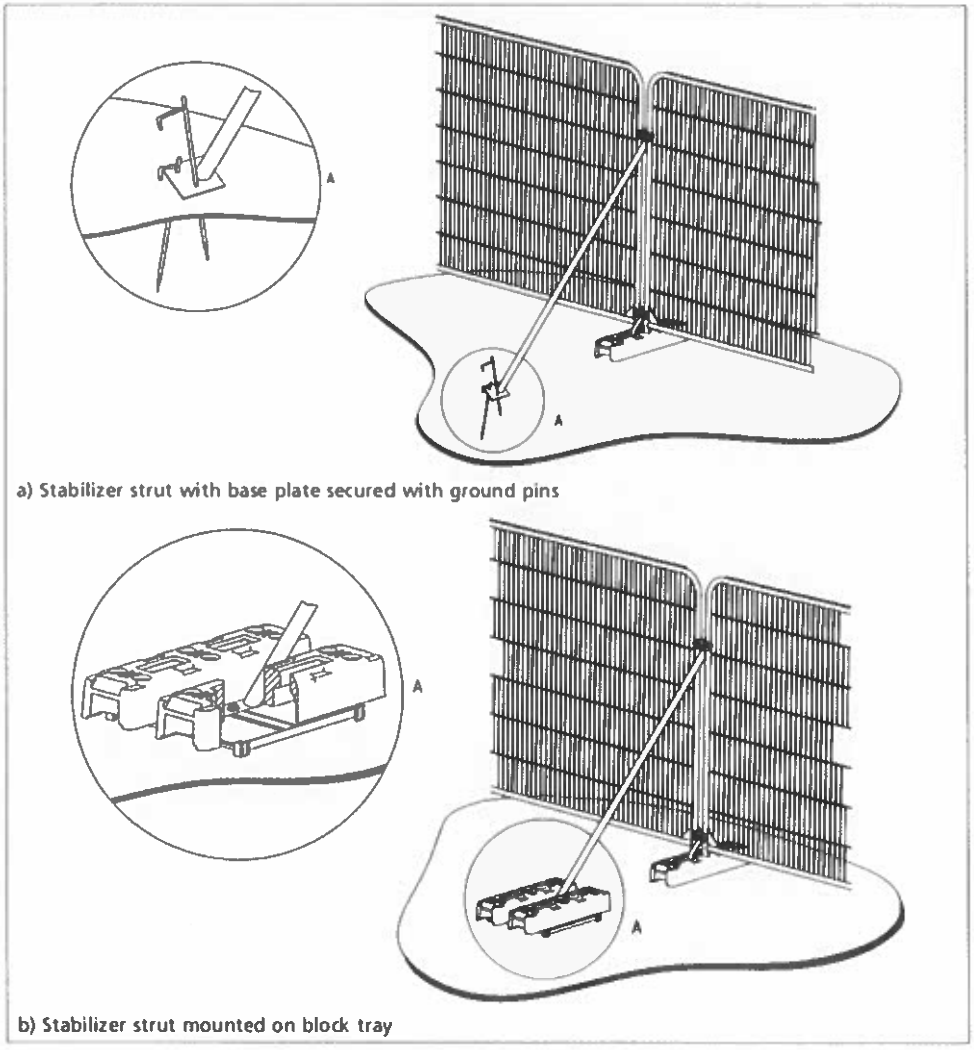


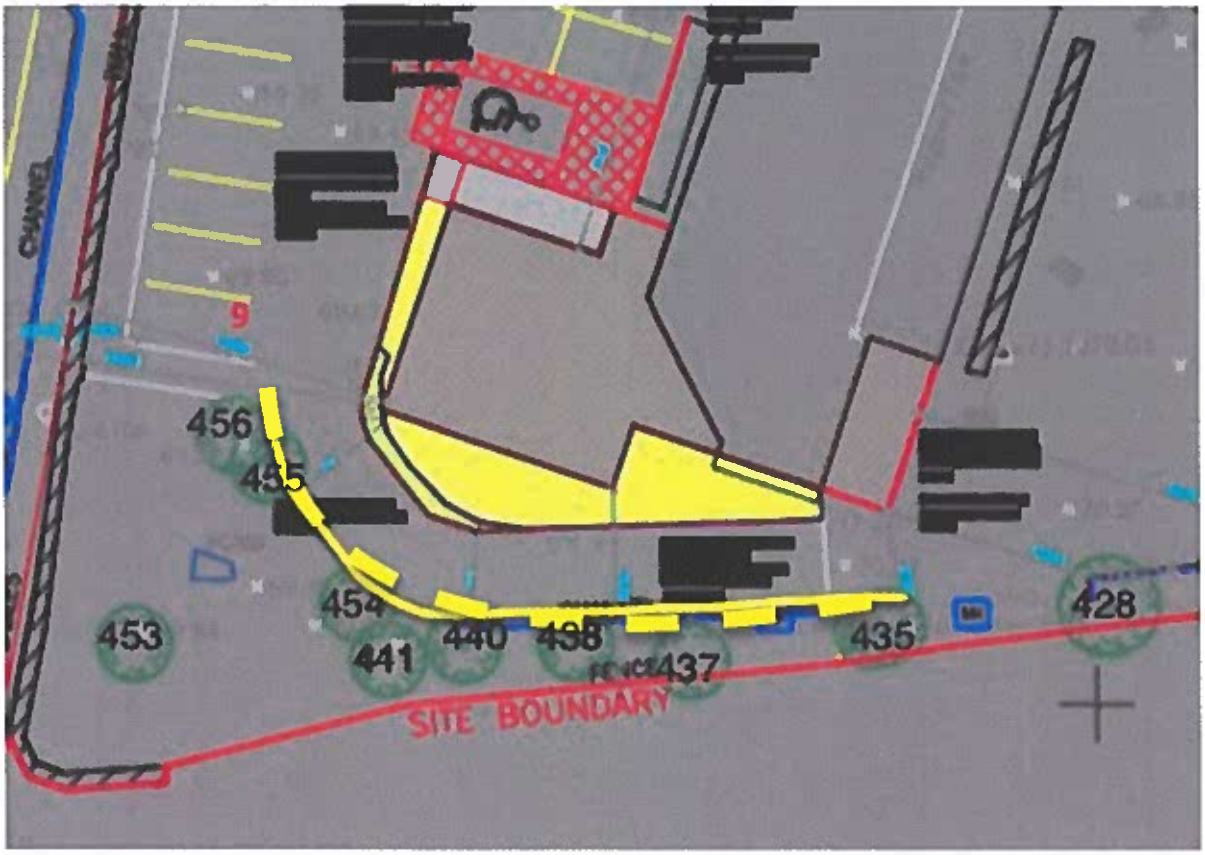
Figure 3. – Scaffolding within the RPA

Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray



Map 1. The yellow hatched line is showing where the protective fence should be erected.

Appendix 2

Glossary of terms:

Basal:	The base of the tree close to the ground (basal shoots are those emanating from the base)
Burr:	Woody protuberances, especially those derived from the mass proliferation of adventitious buds
Compression union:	A 'V' shaped union of co-dominant stems prone to failure
Crown (canopy):	The leaves and branches of a tree
Crown reduction:	Specified pruning i.e. 2m, 3m etc. of the entire crown
Co-dominant:	Stems or branches of ear equal diameter, often weakly attached
Co dominant canopy:	Where 2 or more trees make up a single canopy due to proximity
Decay:	Degradation of wood by fungi and/or bacteria
Defect:	Any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment
Dieback:	The death of part of a plant, usually starting from a distal point and often progressing in stages
Epicormic growth:	Pertaining to shoots or roots which are initiated on mature woody stems; shoots may form in this way from dormant buts or they may be adventitious
Fruiting bodies:	Reproduction bodies of Fungi i.e. Mushrooms, Brackets etc.
Full canopy:	Canopy which extends to the ground or nearly to the ground
Hazard Limb:	An upwardly curved part in which strong internal stresses may occur and cause wood to crack
Included Bark/	Bark of adjacent parts of a tree (usually in forks, acutely angled branches or basal flutes), which is in face to face contact causing
Included Union:	weakness due to the lack of a woody union.
Lean:	Departure of the trunk from the vertical
NSD:	*Natural suppressed deadwood* – Found in conifers, deadwood which has died as the crown height extended and the lower branch no longer has a function in the production of foliage

Occluded Bark:	Where the tree has successfully and completely sealed a wound
Pathogens:	Fungal and/or bacterial infections which degrade the wood and render trees liable to failure
Prune:	To cut and remove any part of a tree or shrub
RPA:	*Root protection area* – Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority
Scaffold limbs:	Branches which form the main framework of the crown of a tree with a decurrent growth habit
Shoot:	Derived from a dormant or adventitious bud on the main stem or branch
Stub/peg:	A short section of a branch, may have been left after previous pruning or storm damage
Tension union	Type of reaction wood in angiosperms that forms on the upper side of branch and stems, acting to pull the member back to a vertical orientation or a genetically programmed angle of growth.
Wound:	Injuries on the surface of a trunk or branch
Wound wood:	Wood with atypical anatomical features, formed in the vicinity of a wound or the occluding tissue around a wound

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Data sheet

Tree No.	Species	Height (m)	Stem Diameter (cm)	Spread (m)	Condition	Vitality	Age	ERC	Remarks	Grade
428	Lawson cypress *Chamaecyparis lawsoniana*	11	127	2 2 2 2	Good	Moderate	EM	40+	Root zone limitations N1m and E30cm Here it is Pushing up the tarmac Root exposed to N and E Small amount of foliage missing from south c.8m Splits into a co-dom stem @c.2.5m	A
429	Lawson cypress *Chamaecyparis lawsoniana*	11	81	2 2 2 2	Good	Moderate	EM	40+	Root zone limitations 1mN Slight lean to the north	A
430	Lawson cypress *Chamaecyparis lawsoniana*	11	81	2 2 2 2	Good	Moderate	EM	40+	Root zone limitations 1mN	A
431	Lawson cypress *Chamaecyparis lawsoniana*	11	70	2 1 2 1	Moderate	Moderate	EM	40+	Root zone limitations 1mN Co-dom @2.5	A

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432	Elder *Sambucus nigra*	5	53	3 0 1 1	Moderate	Moderate	EM	10+	Root zone limitations 1mN Co-dom @ 2 M Heavily leaning north Growing into neighbouring trees	B
433	Lawson cypress *Chamaecyparis lawsoniana*	6	58	1 1 1 0	Moderate	Moderate	EM	40+	Root zone limitations 1mN	B
434	Lawson cypress *Chamaecyparis lawsoniana*	11	44	2 0 0 1	Moderate	Moderate	EM	40+	Root zone limitations 1mN	B
435	Lawson cypress *Chamaecyparis lawsoniana*	7	96	2 2 2 1	Moderate	Moderate	EM	40+	Root zone limitations 1mN Tree codominant at 4 m. recommend remove 1 codominant branch	B
436	Lawson cypress *Chamaecyparis lawsoniana*	7	38	1 0 0 1	Moderate	Moderate	EM	20+	Root zone limitations 1mN	C
437	Lawson cypress *Chamaecyparis lawsoniana*	8	43	0 1 1 0	Moderate	Moderate	EM	20+	Root zone limitations 1mN Heavily leaning north	C

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438	Lawson cypress *Chamaecyparis lawsoniana*	9	56	1 0 1 1	Moderate	Moderate	EM	30+	Root zone limitations 1mN	B
439	Lawson cypress *Chamaecyparis lawsoniana*	8	66	1 1 2 0	Moderate	Moderate	EM	40+	Root zone limitations 1mN	B
440	Lawson cypress *Chamaecyparis lawsoniana*	5	65	3 0 2 2	Poor	Moderate	EM	20+	Root zone limitations 1mN Co-dom @ 2 M Heavily leaning north Tree has been looped at the top in the past	C
441	Lawson cypress *Chamaecyparis lawsoniana*	10	80	1 1 1 2	Moderate	Moderate	EM	40+	Root zone limitations 1mN Cod-om @ 2 M	B
442	Lawson cypress *Chamaecyparis lawsoniana*	5	54	2 1 2 1	Moderate	Moderate	EM	20+	Tree has been topped in the past	B

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443	Leylandii *Cupressus x leylandii*	10	62	2 2 2 1	Good	Moderate	EM	40+	Tree has rubbing branch contact at main stem @ 6m. recommend prune at point of contact.	B
444	Leylandii *Cupressus x leylandii*	11	74	4 3 2 2	Good	Moderate	EM	40+	Heavily leaning north	B
445	Lawson cypress *Chamaecyparis lawsoniana*	10	47	1 1 1 1	poor	Moderate	EM	20+	Tree in poor health due to competition from surrounding trees.	C
446	Lawson cypress *Chamaecyparis lawsoniana*	10	75	2 1 1 1	poor	Moderate	EM	20+	Tree in poor health due to competition from surrounding trees.	U
447	Lawson cypress *Chamaecyparis lawsoniana*	10	92	2 2 2 2	Good	Moderate	EM	40+	Co-dom @ 5 m. recommend removal of competing stem.	A
448	Portugal laurel *P. lusitanica*	4	50	2 2 4 1	Moderate	Moderate	EM	20+	Tree is growing through boundary fence. Recommend prune tree back to fence line.	B

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449	Birch *Betula pendula*	8	38	1 1 1 1	Moderate	Moderate	EM	20+	Tree is growing through boundary fence. Recommend prune tree back to fence line.	B
450	Birch *Betula pendula*	8	50	2 1 2 1	Moderate	Moderate	EM	20+	Tree is growing through overhead power lines. Recommend prune away from power lines and overhang of street.	B
451	Birch *Betula pendula*	5	22	1 1 1 1	Poor	Poor	EM	10+	Tree is in poor health due to competition from surrounding trees. Recommend removal.	U
452	Birch *Betula pendula*	8	41	0 0 0 2	Poor	Moderate	EM	20+	Construction in Critical root zone has impacted the root system causing tree to lean heavily west. Recommend removal.	U
453	Ash *Fraxinus excelsior*	9	84	4 3 2 3	Poor	Moderate	EM	20+	Co-dom @1 m. Construction in Critical root zone has impacted the root system potently making the tree unstable. Recommend removal.	U
454	Norway maple *Acer platanoides*	11	116	5 3 5 5	Good	Moderate	EM	40+	Root zone limitations 1mN Co-dom @2 m.	B

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Data sheet

									Recommend dead wooding and general 25% reduction in response to previous poor pruning.	
455	Birch *Betula pendula*	9	78	3 3 3 3	Moderate	Moderate	EM	20+	Root zone limitations 1mN	A
456	Birch *Betula pendula*	7	79	3 3 3 5	Moderate	Moderate	EM	20+	Root zone limitations 1mN Recommend uplifting low hanging branches. Reduce large lower limb growing towards powerlines	B
457	Cherry *Prunus avium*	8	89	2 4 4 1	Good	Moderate	EM	40+	Recommend uplifting low hanging branches. prune away from power lines.	A